

6. *Copeina argyrops*.

Pyrrhulina argyrops, Cope, Proc. Amer. Phil. Soc. xvii. 1878, p. 694.
Copeina argyrops, Fowler, Proc. Acad. Philad. 1906, p. 295, fig. 2.

Very similar to *C. guttata* in form, coloration, &c., but with the dorsal fin a little further forward, originating above base of pelvics.

R. Maranon, Peruvian Amazon.

4. POGONCHARAX.

Pogonocharax, Regan, Ann. & Mag. Nat. Hist. (7) xix. 1907, p. 261.

Differs from *Pyrrhulina* in the toothless mouth and the presence of two pairs of barbels, præmaxillary and maxillary.

1. *Pogonocharax rehi*.

Regan, *l. c.* fig.

Dorsal 8, above the anal. Anal 8. 25 scales in a longitudinal series. Maxillary barbel $\frac{2}{3}$ as long as the fish.

Argentina.

1. 45 mm. (type).

Argentina.

Reh.

LI.—On a Collection of Small Mammals from the Tsin-ling Mountains, Central China, presented by Mr. G. Fenwick Owen to the National Museum. By OLDFIELD THOMAS.

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DURING the late summer of 1911 Mr. G. Fenwick Owen, to whom the National Museum already owed some valuable collections of mammals from French Gambia, made an exploring and collecting expedition into Central China, into Southern Shen-si and Kan-su, with the intention of exploring the mountain-ranges between those provinces and Eastern Tibet. Owing, however, to the breaking out of the recent revolution in China, Mr. Owen's party had to shorten their work and to come home through Tibet and Russia in Asia, by which route they were fortunately enabled to transport in safety such collections as they had made before the revolution broke out.

The small mammals, which Mr. Fenwick Owen has now presented to the British Museum, were all prepared by his

companion and interpreter, Dr. J. A. C. Smith, who had already accompanied Mr. Malcolm Anderson into this region, and had also made collections on his own account, so that both country and fauna were well known to him.

The collection consists of 68 specimens, belonging to 18 species, of which 7 are new, thus again showing the richness and diversity of the fauna of this wonderful region.

Of these by far the most striking is the new mole, *Scapanulus oweni*, representing a new genus more allied to the American moles than to any previously known in Asia. Other valuable accessions are the *Zapus*, the *Sicista*, and the new shrews of the new genera *Blarinella* and *Chodsigoa*.

Mr. Fenwick Owen and Dr. Smith are to be congratulated on the amount of novelties yielded by the collection, which forms a most valuable supplement to the series obtained by Mr. Anderson during the Duke of Bedford's Exploration of Eastern Asia.

1. *Scapanulus oweni*, gen. et sp. n.

♂. 59. 46 miles S.E. of Tao-chou, Kan-su. Alt. 10,000'.

♂. 72. 23 miles S.E. of Tao-chou. 9000'.

"In mossy undergrowth in fir-forest."—*J. A. C. S.*

SCAPANULUS, gen. nov. (*Talpidae*, subfam. *Scalopinæ*).

Manus broadly expanded, nearly as much so as in the true moles, more so than in *Scaptonyx*. Claws rather slender for a mole; those of hind foot thin, rather straight, except that of the hallux, which is curved. On both sides in both specimens the hallux is peculiarly twisted away from the other digits, but this may possibly be due to distortion in drying. Tail comparatively long and thickly haired. Skull about as in *Urotrichus*, the pterygoid region less inflated and with better developed pterygoids than in *Scapanus*. Tympanics incomplete. Interparietal broad, less tapering forwards than in *Urotrichus*.

Teeth $\frac{9}{9} \times 2 = 36$, these being apparently

$$I. \frac{2}{2}, C. \frac{1}{1}, PM. \frac{3}{3}, M. \frac{3}{3}.$$

As to the individual homologies of the teeth, I would tentatively suggest the following as the complete formula of the permanent dentition:—

$$I. \frac{1.2.0}{1.2.0}, C. \frac{1}{1}, PM. \frac{1.0.3.4}{1.0.3.4}, M. \frac{1.2.3}{1.2.3}.$$

In this the premolar formula is not very certain, since it

may possibly be 1.2.0.4, as in the *Urotrichus-Uropsilus* series of genera; but I am quite confident about the lower incisors, which are 1.2.0, as in *Desmana* and the American moles, as compared with 0.2.3 or 0.2.0 in *Urotrichus*, *Uropsilus*, and their allies.

The most salient points of the dentition are: (1) the total number of 9 above and below, elsewhere only found in *Neurotrichus*, and (2) the *Desmana*-like character of the lower incisors, which are subequal, strongly proclivous, the second equally with the first abutting upon and being worn down by the hinder surface of the large anterior upper incisors.

I^1 large, about as large proportionally as in *Scalops* and *Urotrichus*, therefore larger than in *Scapanus*, but very far from as large or as specialized as in *Desmana* and *Galemys*. I^2 and p^1 subequal, small, the canine between them rather larger, double-rooted. P^3 of about the same length and twice the bulk of the canine; p^4 about four times the bulk of p^3 , with a well-marked internal cusp. Molars with their internal ledge subtrilobate, about as in *Scapanus*.

Type. Scapanulus oweni, sp. n.

Dividing, as I should, the family *Talpidae* into five sub-families—the *Desmaninae*, *Talpinae*, *Scalopinæ*, *Condylurinae*, and *Uropsilinae*—this most interesting new genus falls obviously into the *Scalopinæ*, within which it belongs rather to the Scalopine than the Urotrichine series of genera. But with its rather less modified manus and pterygoids and comparatively delicate skull it adds another to the links which bind these two series of genera to each other. From *Scaptonyx*, the only allied genus geographically near it, it is at once separable by its more modified manus, fewer teeth, much larger i^1 , and its *Desman*-like lower incisors.

Scapanulus oweni, sp. n.

Bulk about half that of *Talpa europæa*. Colour of body exactly as in that animal, the lower surface almost imperceptibly lighter than the upper. Head rather paler. Hands pale brown above, with whitish edges. Feet brown proximally, white on the digits. Tail long, thick, well-haired, grey-brown with rather lighter tip.

Skull and teeth as described above.

Dimensions of the type (measured in flesh):—

Head and body 108 mm.; tail 38; hind foot 14.

Skull: greatest length 28.2; condylo-basal length 27.5;

greatest breadth 13; zygomatic breadth 10·6; interorbital breadth 5·5; palatal length 12·7; upper tooth-series 12·3; molars only 5·2.

Hab. as above.

Type. Adult male. B.M. no. 12. 8. 5. 2. Original number 72. Collected 31st October, 1911.

I have great pleasure in naming this most interesting new mole in honour of Mr. Fenwick Owen, to whose interest and kindness the Museum owes this valuable accession to its collections.

2. *Sorex sinalis*, sp. n.

♂. 8, 11, 12, 13, 16; ♀. 5, 7, 14. 45 miles S.E. of Feng-siang-fu, Shensi. 10,500'.

♀. 71. 17 miles S.E. of Tao-chou, Kan-su. 8900'.

"Rocky mossy mountain-top."—*J. A. C. S.*

A large plain-coloured species, with a long tail.

Size one of the largest of the genus. Fur about 5 mm. long on the back in summer specimens. General colour uniform greyish brown, with scarcely any tendency to a tricolor pattern; under surface drab-brown. Hands and feet brownish white. Tail long, slightly pencilled at the tip, brown above, lighter below.

Skull large, with long muzzle; brain-case not specially broadened.

Unicuspsids slightly but evenly decreasing backwards. Concavities behind molars well marked.

Dimensions of the type:—

Head and body 70 mm.; tail 55; hind foot 14.

Skull: condylo-incisive length 21; condylo-basal length 20·3; greatest breadth 9·6; upper tooth-row 9·1; front of i^1 to front of p^4 4·2; front of p^4 to back of m^2 4·5; breadth between outer corners of m^1 4·8.

Hab. 45 miles S.E. of Feng-siang-fu, Shen-si.

Type. Adult male. B.M. no. 12. 8. 5. 3. Original number 8. Collected 10th August, 1911.

This large but rather delicately built shrew has a decidedly longer skull than the other large Eastern plain-coloured species *S. unguiculatus* and *shinto*. It has nothing of the remarkable development of tooth-pigment characteristic of *S. daphenodon*.

3. *Sorex cansulus*, sp. n.

♂. 68. 15 miles S.E. of Tao-chou. 8500'.

♀. 56, 65. 46 miles S.E. of Tao-chou. 9800–10,000'.

S. annexus-centralis group, paler than the former and without the long muzzle of the latter.

Size as in *S. centralis*. Fur of back about 4 mm. in length. General colour above greyish brown, about as in *S. centralis*, much greyer than in *S. annexus*, which verges towards Prout's brown; sides in one specimen tinged with buffy, but no definite tricolor pattern present. No trace of a darker dorsal stripe. Under surface drab or broccoli-brown. Hands and feet brownish white. Tail dark brown above, lighter below.

Skull slightly longer than in *S. annexus*, its muzzle not specially lengthened as in *S. centralis*.

Dimensions of the type:—

Head and body 64 mm.; tail 38; hind foot 12.

Skull: condylo-incisive length 19.2; condylo-basal length 18.1; greatest breadth 9; upper tooth-row 8; front of i^1 to front of p^4 3.7; front of p^4 to back of m^2 4; breadth between outer corners of m^1 4.6.

Hab. (of type). 46 miles S.E. of Tao-chou.

Type. Adult female. B.M. no. 12. 8. 5. 13. Original number 56. Collected 23rd September, 1911.

This species connects the Korean *S. annexus* with the Central-Asian *S. centralis*. It is much paler in colour than the former and has not the lengthened muzzle of the latter. While the skulls of all three are of about the same bulk, the muzzle, as measured from the front of p^4 to the front of the large incisors, is in *S. annexus* 3.5 mm., *S. cansulus* 3.7 mm., and *S. centralis* 4.2 mm.

4. *Sorex wardi*, Thos.

♂. 42, 43, 45; ♀. 46. 42 miles S.E. of Tao-chou. 10,000'.

♂. 58, 63, 64. 46 miles S.E. of Tao-chou. 10,000'.

♀. 29. 30 miles S.E. of Tao-chou. 9000'.

In summer pelage. The type, which is in winter pelage, came from 10 miles S. of Tao-chou.

5. *Chodsigoa lamula*, sp. n.

♂. 66. 40 miles S.E. of Tao-chou. Alt. 9500'. 1st October, 1911. B.M. no. 12. 8. 5. 22. *Type.*

"Picked up on path in forest."—*J. A. C. S.*

Allied to *C. hypsibia*, but smaller.

General proportions and comparative length of tail about as in *C. hypsibia*, but size decidedly less. Fur close and soft; hairs of back about 3.5 mm. in length. General colour above

“mouse-grey,” scarcely paler below. Hands and feet white, a slightly darker shade edging the latter externally. Tail greyish above, glossy whitish below.

Skull smaller than in *C. hypsibia*, its interorbital region even lower and flatter than in that species.

Dimensions of the type (measured in flesh) :—

Head and body 67 mm.; tail 54; hind foot 13.

Skull: condylo-basal length 18; condylo-incisive length 18.7; greatest breadth (c.) 9; upper tooth-series 8.0; combined length of p^4-m^2 4.7.

Hab. & Type as above.

The species of *Chodsigoa* are all very closely allied, differing mainly by size and length of tail. This is the smallest and shortest-tailed as yet described.

6. *Blarinella griselda*, sp. n.

♀. 41. 42 miles S.E. of Tao-chou. 10,000'. 17th September, 1911. B.M. no. 12. 8. 5. 23. *Type*.

“On mossy bank, in birch-wood.”—*J. A. C. S.*

Smaller, greyer, and shorter-tailed than *B. quadraticauda*.

Size rather less than in *quadraticauda*. General colour above “mouse-grey,” rather paler and more drabby below. Hands, feet, and tail all dull greyish, not dark brown as in the allied species; tail decidedly shorter than in that animal.

Skull rather smaller than in *quadraticauda*. Second upper unicuspid evenly intermediate in size between the first and third—in *quadraticauda* the second nearly equals the first and is conspicuously larger than the third.

Dimensions of the type (measured in flesh) :—

Head and body 68 mm.; tail 33; hind foot 11.

Skull: condylo-incisive length 20; condylo-basal length 18.6; greatest breadth 9.4; upper tooth-series 8.6; front of p^4 to back of m^2 4.5.

Hab. & Type as above.

This second species of the genus *Blarinella* is easily distinguishable from the Sze-chwan form by its smaller size, greyer colour, and shorter tail.

7. *Mustela astuta*, M.-Edw.

♂. 40, 73. 25 and 40 miles S.E. of Tao-chou. 9000–9500'.

The marked narrowness of the frontal region distinguishes this weasel from the Tibetan *M. temon*, Hodgs., which it

resembles very closely in external characters. The type was obtained by David at Moupin.

The species had not previously been represented in the Museum collection.

8. *Eutamias asiaticus*, Pall.

♂. 62. 46 miles S.E. of Tao-chou. 9800'.

9. *Apodemus speciosus peninsulae*, Thos.

♂. 21, 22, 23, 24, 47, 53, 67; ♀. 25. 15 to 46 miles S.E. of Tao-chou. 8500-10,000'.

10. *Microtus malcolmi*, Thos.

♂. 10; ♀. 6, 9, 15. 45 miles S.E. of Feng-siang-fu, Shensi. 10,500'.

♀. 19, 49. 40 to 46 miles S.E. of Tao-chou, Kan-su. 9500'.

11. *Microtus oniscus*, Thos.

♂. 18, 50; ♀. 27, 31, 35, 36, 37, 38. 40 to 46 miles S.E. of Tao-chou, Kan-su. 9500'.

12. *Microtus (Caryomys) eva*, Thos.

♂. 28, 32, 54, 55; ♀. 17, 39, 57, 69, 70. 17 to 46 miles S.E. of Tao-chou. 8900-9500'.

13. *Myospalax smithii*, Thos.

♀ (immature). 44. 40 miles S.E. of Tao-chou. 9000'.

The second specimen known of this species. Though immature, it already shows evidence of the cranial and dental characters distinguishing *M. smithii* from *M. cansus*.

14. *Sicista concolor*, Büchn.

♀. 30. 35 miles S.E. of Tao-chou. 9000'.

♀. 33. 44 miles S.E. of Tao-chou. 10,000'.

The type locality of this species is the Alps of Si-ning, also in the province of Kan-su. No example of it had hitherto been in the Museum collection.

15. *Zapus (Eozapus) setchuanus vicinus*, subsp. n.

♂. 61; ♀. 52 to 60. 46 miles S.E. of Tao-chou, Kan-su. 9800-10,000'.

Similar to the Sze-chwan form in essential characters, but with longer tail, entirely white belly without central line (one specimen with a few pale buffy hairs along the mesial line of the belly), and with the tail usually black above to the tip.

Dimensions of the type (measured in flesh):—

Head and body 78 mm.; tail 144; hind foot 28; ear 15.

Skull: greatest length 23.2; condylo-incisive length 20; zygomatic breadth 12.7; nasals 9; interorbital breadth 4.2; palatilar length 8.7; palatal foramina 4.6; upper tooth-series 3.6.

Hab. as above.

Type. Adult female. B.M. no. 12. 8. 5. 62. Original number 52. Collected 22nd September, 1911.

These are the first specimens of the Asiatic *Zapus* received by the British Museum, and, so far as I know, the first that have been obtained since the Paris Museum received the examples from Sze-chwan described by M. Pousargues. They are therefore a most acceptable addition to the Museum collections.

The Kan-su form is evidently closely allied to that from Sze-chwan, but has a longer tail (126, 137, and 144 mm. in three specimens as compared with 95, 103, and 120) and is practically without the ventral stripe characteristic of the latter. One specimen (no. 60) has a few of the mesial hairs of the abdomen washed with buffy, and this indicates the affinity of the two forms. In a similar way one specimen (no. 61) out of three has a white tail-pencil, like all three of the true *setchuanus*.

16. *Ochotona syriaca*, Thos.

♂. 34. 42 miles S.E. of Tao-chou, Kan-su. 12,000'.

The typical specimens were obtained at 10,600' on Mount Tai-pei-san, some 200 miles further east on the same mountain-chain.

17. *Ochotona cansa*, Lyon.

♂. 48, 51; ♀. 20. 40 to 46 miles S.E. of Tao-chou. 9500-10,000'.

These specimens are slightly darker in colour than examples from nearer Tao-chou, the type locality, and are therefore to

some extent intermediates between the true *cansa* and the subspecies next following.

18. *Ochotona cansa morosa*, subsp. n.

♀. 4. 'Tai-pai-san, 45 miles S.E. of Feng-siang-fu, Shen-si. 10,500'. 4th August, 1911. B.M. no. 12. 8. 5. 68.
Type.

Size slightly greater than in typical *cansa*. Colour darker, the hairs of the back more heavily blackened terminally. Under surface with all the hairs broadly washed with dark buffy, instead of, as in true *cansa*, only those of the middle line being so coloured, the sides of the belly being whitish. Hands and feet darker and more uniformly buffy above and more blackish below, the whitish fringes on either side of the feet, so marked in *cansa*, less developed and dull buffy in colour, so that practically the whole of the sole appears sooty brown.

Skull with rather more strongly convex frontal outline, broader interorbital space, larger brain-case, and broader palatal bridge than in any of the specimens of true *cansa*. In the type the projecting point representing the posterior part of the septum of the palatal foramina is more developed than usual, but this may be an individual peculiarity.

Dimensions of the type:—

Head and body 149 mm.; tail 8; hind foot 27; ear 18.

Skull: greatest length 36; condylo-incisive length 34.3; zygomatic breadth 18; nasals 11.2 × 4.4; interorbital breadth 4.1; breadth of brain-case 14.2; palatal bridge 2.6; upper tooth-series (alveoli) 6.7.

Hab. & Type as above.

In its dull colour this Pika has some resemblance to the *O. tibetana* of Sze-chwan, but is smaller, with larger bullæ and a more bowed frontal outline. Much more material is needed before the true relationship to each other of these allied forms of *Ochotona* can be clearly understood.

LII.—*New Bats and Rodents from S. America.*

By OLDFIELD THOMAS.

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Chaeronycteris inca, sp. n.

Nearly allied to *Ch. minor*, but the premolars shorter (horizontally) and the molars longer.